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?
HILIGHT set on as ''
HILIGHT set on as ''
? b 155 434 55

       01jun99 10:07:39 User231882 Session D424.2
            $0.00    0.040 DialUnits File410
     $0.00  Estimated cost File410
            FTSNET   0.002 Hrs.
     $0.00  Estimated cost this search
     $0.00  Estimated total session cost   0.156 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R)  1966-1999/Jul W4
         (c) format only 1999 Dialog Corporation
*File 155: reloaded, note accession numbers changed.
  File 434:SciSearch(R) Cited Ref Sci  1974-1989/Dec
         (c) 1998 Inst for Sci Info
  File  55:Biosis Preiviews(R)  1993-1999/May W4
         (c) 1999 BIOSIS
*File  55: File is reloaded. Accession number changed.

      Set  Items  Description
      ---  -----  -----------
? s double(w)wall

          249480  DOUBLE
          159510  WALL
      S1      83  DOUBLE(W)WALL
? s microcapsule

      S2     637  MICROCAPSULE
? s s1 and s2
```

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?
HILIGHT set on as ''
HILIGHT set on as ''
? b 155 434 55

       01jun99 10:07:39 User231882 Session D424.2
            $0.00    0.040 DialUnits File410
     $0.00  Estimated cost File410
            FTSNET   0.002 Hrs.
     $0.00  Estimated cost this search
     $0.00  Estimated total session cost   0.156 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R)  1966-1999/Jul W4
         (c) format only 1999 Dialog Corporation
*File 155: reloaded, note accession numbers changed.
  File 434:SciSearch(R) Cited Ref Sci  1974-1989/Dec
         (c) 1998 Inst for Sci Info
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         (c) 1999 BIOSIS
*File  55: File is reloaded. Accession number changed.

      Set  Items  Description
      ---  -----  -----------
? s double(w)wall

          249480  DOUBLE
          159510  WALL
      S1      83  DOUBLE(W)WALL
? s microcapsule

      S2     637  MICROCAPSULE
? s s1 and s2

             83  S1
            637  S2
      S3      0  S1 AND S2
? s wall

      S4  159510  WALL
? s s2 aand s4

>>>Term "AAND" in invalid position
? s s2 and s4

            637  S2
          159510  S4
      S5    101  S2 AND S4
? s permeab?

      S6  116735  PERMEAB?
? s s5 and s6

            101  S5
          116735  S6
      S7     11  S5 AND S6
? rd

...completed examining records
```

S8 8 RD (unique items)
? t s8/3,k,ab/1-8

8/3,K,AB/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08930708 97059465
Microencapsulation of ketoprofen using w/o/w complex emulsion technique.
El-Gibaly I; Safwat SM; Ahmed MO
Pharmaceutics Department, Assiut University, Egypt.
J Microencapsul (ENGLAND) Jan-Feb 1996, 13 (1) p67-87, ISSN 0265-2048
Journal Code: JMG
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Sustained release cellulose acetate butyrate (CAB)-polystyrene (PS) microcapsules containing ketoprofen (a non-steroidal anti-inflammatory drug) were prepared adopting the modified W/O/W complex emulsion technique. The effect of polystyrene concentration and core/coat ratio on the yield, geometric mean particle diameter, dg, size distribution, drug loading as well as release and surface characteristics of the microcapsules was investigated. The results obtained revealed that polystyrene utilization as a **wall** material plays a dominant role in the manufacturing process. A particular composition of 92 center dot 5: 7 center dot 5 (%) of CAB to PS was found to improve greatly the **microcapsule** yield and maximize the drug loading. In most cases, the encapsulation efficiencies increased with increasing **microcapsule** size and theoretical drug loading. Kinetic analysis of the data shows that the drug release process from CAB microcapsules followed Higuchi model (a diffusion-controlled model for a planar matrix), whereas the release behaviour conforms with Baker and Lonsdale model (a diffusion-controlled model for a spherical matrix) for CAB-PS microcapsules. The preparation of free films of CAB and CAB-PS was described for comparison. The effect of processing parameters (polystyrene concentration, total polymers concentration and permeant concentration) on the permeation of ketoprofen through the polymeric films was discussed. The results demonstrated that ketoprofen permeation through the films and microcapsules could be controlled by modifying the CAB-PS ratio in the polymer matrices. The **permeability** constants lowered with increasing total polymers concentration up to 5% and were proportional to permeant concentration. To compare the kinetics of drug release from polymeric films with those of microcapsules, ketoprofen was incorporated at different concentrations within CAB-PS cast films. These films exhibited sustained release of the drug (t0 center dot 5; 58-146 h). Release rates were found to agree with the Baker and Lonsdale model, previously suggested for ketoprofen release from CAB-PS microcapsules.

... characteristics of the microcapsules was investigated. The results obtained revealed that polystyrene utilization as a **wall** material plays a dominant role in the manufacturing process. A particular composition of 92 center...
...5: 7 center dot 5 (%) of CAB to PS was found to improve greatly the **microcapsule** yield and maximize the drug loading. In most cases, the encapsulation efficiencies increased with increasing **microcapsule** size and theoretical drug loading. Kinetic analysis of the data shows that the drug release...

... microcapsules could be controlled by modifying the CAB-PS ratio in the polymer matrices. The **permeability** constants lowered with increasing total polymers concentration up to 5% and were proportional to permeant...
...; Compounding--Methods--MT; Excipients--Chemistry--CH; Excipients --Metabolism--ME; Kinetics; Microscopy, Electron, Scanning; Particle Size; **Permeability**; Polystyrenes--Metabolism--ME

8/3,K,AB/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08393808 95378924

Gradation of **microcapsule wall** porosity by deposition of polymer mixtures (Eudragit RL and Eudragit RS). Phase separation of polymer mixtures and effects of external media and conditions on release.

Donbrow M; Hoffman A; Benita S

Department of Pharmacy, School of Pharmacy, Hebrew University of Jerusalem, Israel.

J Microencapsul (ENGLAND) May-Jun 1995, 12 (3) p273-85, ISSN 0265-2048 Journal Code: JMG

Languages: ENGLISH

Document type: JOURNAL ARTICLE

With the aim of increasing flexibility in controlling release from microcapsules, mixtures of **wall** polymers varying in porosity were investigated by phase separation. Eudragit RL and RS (polymethylmethacrylate linear backbone polymers) mixtures differing in polar substituent content and porosity were used as the **wall** material and were deposited using a non-solvent addition method. Release rates increased with polar group content of the mixtures, using theophylline, potassium dichromate or sodium chloride as model core materials. Theophylline release rate had the same relationship to polar group content as found earlier for urea permeation of cast mixed-polymer films. Release was generally accelerated in these systems when the external medium contained sodium lauryl sulphate as a wetting agent but not consistently, decreasing unexpectedly for RL-theophylline microcapsules. Localized dissolution of core substance was visible microscopically during release from single microcapsules. The release rate was sensitive to agitation intensity only at low **wall** to core ratios. Temperature change revealed only a single release mechanism for sodium chloride by Arrhenius equation treatment. Buffer ions penetrated coatings readily, changing theophylline release rates and providing clear evidence of diffusion via a pore-capillary mechanism.

Gradation of **microcapsule wall** porosity by deposition of polymer mixtures (Eudragit RL and Eudragit RS). Phase separation of polymer ...

With the aim of increasing flexibility in controlling release from microcapsules, mixtures of **wall** polymers varying in porosity were investigated by phase separation. Eudragit RL and RS (polymethylmethacrylate linear backbone polymers) mixtures differing in polar substituent content and porosity were used as the **wall** material and were deposited using a non-solvent addition method. Release rates increased with polar...

... release from single microcapsules. The release rate was sensitive to agitation intensity only at low **wall** to core ratios. Temperature change revealed only a single release mechanism for sodium chloride by...

; Delayed-Action Preparations; Diffusion; Hydrogen-Ion Concentration; Kinetics; Microscopy, Electron, Scanning; **Permeability**; Porosity; Potassium Dichromate--Pharmacology--PD; Sodium Chloride--Chemistry--CH; Sodium Dodecyl Sulfate--Pharmacology--PD; Temperature...

8/3,K,AB/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06155310 85264227

Microencapsulation of paracetamol using polyacrylate resins (Eudragit Retard), kinetics of drug release and evaluation of kinetic model.

Benita S; Hoffman A; Donbrow M

J Pharm Pharmacol (ENGLAND) Jun 1985, 37 (6) p391-5, ISSN 0022-3573

Journal Code: JNR
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Methacrylate copolymers were used for microencapsulation of paracetamol by phase separation from chloroform with polyisobutylene 6% in cyclohexane. With polyisobutylene as an anti-aggregating agent, high quality microcapsules were obtained. Drug release appeared to fit both first order and Higuchi matrix model kinetics. However, on application of the differential rate treatment, the evidence supported the first order description, which was further supported by computed simulations of the models. Variation of production conditions showed that increasing the proportion of core material raised the **microcapsule** drug content and the release rate. Reduction of core particle size correlated with reduced coating thickness and faster release rate. The rate constants correlated with the estimated surface areas and **wall** thicknesses of the various batches. The data were used to estimate an apparent **permeability** constant for paracetamol in Eudragit RS microcapsules, which was constant and comparable with values found single core, non-aggregated microcapsules containing other similar drugs and different **wall** materials.

... models. Variation of production conditions showed that increasing the proportion of core material raised the **microcapsule** drug content and the release rate. Reduction of core particle size correlated with reduced coating thickness and faster release rate. The rate constants correlated with the estimated surface areas and **wall** thicknesses of the various batches. The data were used to estimate an apparent **permeability** constant for paracetamol in Eudragit RS microcapsules, which was constant and comparable with values found single core, non-aggregated microcapsules containing other similar drugs and different **wall** materials.

8/3,K,AB/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04830990 89361964
Dissolution studies of microencapsulated 4-sulphonamidophenoxyacetic acid: effect of preparative variables on dissolution.
Dragan D; Airinei A; Carpov A
P. Poni Institute of Macromolecular Chemistry, Iassy, Romania.
J Microencapsul (ENGLAND) Jul-Sep 1985, 2 (3) p223-34, ISSN 0265-2048
Journal Code: JMG
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Ethylcellulose-walled microcapsules of 4-sulphonamidophenoxyacetic acid were prepared and their in vitro dissolution characteristics were investigated. Different release kinetics must be applied according to the respective average particle size and **wall** content values of the **microcapsule** fractions. The 'dissolution model' appears to fit better with small thin-walled microcapsules whereas, for larger thicker-walled microcapsules, Higuchi-type kinetics seem to describe the release of the major part of the drug more adequately.

... investigated. Different release kinetics must be applied according to the respective average particle size and **wall** content values of the **microcapsule** fractions. The 'dissolution model' appears to fit better with small thin-walled microcapsules whereas, for...
; Cellulose--Analogs and Derivatives--AA; **Permeability**; Solubility

8/3,K,AB/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04453900 83032984

Release kinetics of sparingly soluble drugs from ethyl cellulose-walled microcapsules: salicylamide microcapsules.
Donbrow M; Benita S
J Pharm Pharmacol (ENGLAND) Sep 1982, 34 (9) p547-51, ISSN 0022-3573
Journal Code: JNR
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Release rates of salicylamide from single-core ethyl cellulose (EC) coated microcapsules were measured as a function of **wall** thickness and core particle size. Whereas up to ca 50% release zero order kinetics were observed, the overall reaction fitted the first order and Higuchi matrix treatment. These were distinguished by the differential rate treatment, which showed that the overall release in fact followed the first order pattern. For investigating whether the process was membrane-controlled, the experimental rate constants were transformed into effective **permeability** constants (P0 and P1) with the aid of the **microcapsule** dimensional parameters needed in the relevant equations and compared with the salicylamide **permeability** constant for planar ethyl cellulose membranes (P), measured experimentally. P0 and P1 values obtained for a given **microcapsule** preparation were not identical: P0 was of the same order as P, P1 being much lower. While membrane-controlled release is evident, it is apparently accompanied by a first order concentration gradient change inside the **microcapsule**.

... salicylamide from single-core ethyl cellulose (EC) coated microcapsules were measured as a function of **wall** thickness and core particle size. Whereas up to ca 50% release zero order kinetics were...

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... is evident, it is apparently accompanied by a first order concentration gradient change inside the **microcapsule**.
; Capsules; Hydrogen-Ion Concentration; Kinetics; Particle Size; **Permeability**; Solubility; Theophylline; Time Factors

8/3,K,AB/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

6/1/99

04449086 82169864
Release kinetics of sparingly soluble drugs from ethyl cellulose-walled microcapsules: theophylline microcapsules.
Benita S; Donbrow M
J Pharm Pharmacol (ENGLAND) Feb 1982, 34 (2) p77-82, ISSN 0022-3573
Journal Code: JNR
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Release rates of theophylline from ethyl cellulose-coated microcapsules were measured as a function of **wall** thickness and core particle size. The kinetic data conformed with first order release and also the Higuchi matrix model. However, application of the differential rate treatment, hitherto applied only to drug matrix dispersions, showed that release from the microcapsules definitely followed the first order equation. For the purpose of confirming that the release process was membrane-controlled, the experimental rate constants were transformed into effective **permeability** constants (P1) with the aid of the **microcapsule** dimensional parameters needed in the relevant equations and compared with

the **permeability** constant (P) of theophylline measured experimentally using planar ethyl cellulose membranes. P1 values decreased linearly to a moderate extent with **wall** thickness, probably due to decrease in porosity during **wall** -formation. P1 values of the thicker-walled microcapsules were found to be of the same order as the membrane P value, supporting a release mechanism of membrane control under non-steady state conditions.

Release rates of theophylline from ethyl cellulose-coated microcapsules were measured as a function of **wall** thickness and core particle size. The kinetic data conformed with first order release and also...

... that the release process was membrane-controlled, the experimental rate constants were transformed into effective **permeability** constants (P1) with the aid of the **microcapsule** dimensional parameters needed in the relevant equations and compared with the **permeability** constant (P) of theophylline measured experimentally using planar ethyl cellulose membranes. P1 values decreased linearly to a moderate extent with **wall** thickness, probably due to decrease in porosity during **wall** -formation. P1 values of the thicker-walled microcapsules were found to be of the same...

; Cellulose--Analogs and Derivatives--AA; Delayed-Action Preparations; Diffusion; Kinetics; Particle Size; **Permeability**; Solubility

8/3,K,AB/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

03415078 81194204

Effect of capsule size on **permeability** of gelatin-acacia microcapsules toward sodium chloride.

Jalsenjak I; Kondo T

J Pharm Sci (UNITED STATES) Apr 1981, 70 (4) p456-7, ISSN 0022-3549
Journal Code: JO7
Languages: ENGLISH
Document type: JOURNAL ARTICLE

The effect of capsule size on the **permeability** of gelatin-acacia microcapsules toward sodium chloride was investigated. Gelatin-acacia microcapsules containing olive oil were prepared by phase separation. The encapsulated olive oil was extracted with acetone and the acetone-loaded microcapsules dispersed in acetone were fractionated by a series of mesh screens. The core material of acetone than was replaced by water. The **permeability** of each capsule fraction toward sodium chloride was estimated from the change in electrical conductance with time of the mixture of **microcapsule** suspension and sodium chloride solution. The **permeability** decreased with decreasing capsule size. Structured water in and around the capsule **wall** may be the cause of the observed size effect.

Effect of capsule size on **permeability** of gelatin-acacia microcapsules toward sodium chloride.

The effect of capsule size on the **permeability** of gelatin-acacia microcapsules toward sodium chloride was investigated. Gelatin-acacia microcapsules containing olive oil...

... series of mesh screens. The core material of acetone than was replaced by water. The **permeability** of each capsule fraction toward sodium chloride was estimated from the change in electrical conductance with time of the mixture of **microcapsule** suspension and sodium chloride solution. The **permeability** decreased with decreasing capsule size. Structured water in and around the capsule **wall** may be the cause of the observed size effect.

; Chemistry; Particle Size; **Permeability**

8/3,K,AB/8 (Item 1 from file: 55)
DIALOG(R)File 55:Biosis Preiviews(R)

11800625 BIOSIS NO.: 199900046734
Microencapsulation of pesticides by interfacial polymerization utilizing isocyanate or aminoplast chemistry.

AUTHOR: Scher Herbert B(a); Rodson Marius; Lee Kuo-Shin
AUTHOR ADDRESS: (a)Zeneca Ag Products, Western Research Center, 1200 South 47th Street, Richmond, CA 94804-0023, USA

JOURNAL: Pesticide Science 54 (4):p394-400 Dec., 1998
ISSN: 0031-613X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Interfacial polymerization microcapsulation processes based on isocyanate or aminoplast chemistry, where all **wall**-forming reactants are placed in the dispersed oil phase are described. Emphasis is placed on mechanism of interfacial reactions, physical nature of the resulting membranes and methods used to vary membrane **permeability**. Pesticide **microcapsule** formulations can be used to reduce mammalian toxicity and extend activity, to control evaporation, to reduce phytotoxicity, to protect pesticide from rapid environmental degradation, to reduce leaching and to reduce pesticide levels in the environment. Examples are provided to demonstrate how pesticide performance characteristics can be altered using this type of formulation.

ABSTRACT: Interfacial polymerization microcapsulation processes based on isocyanate or aminoplast chemistry, where all **wall**-forming reactants are placed in the dispersed oil phase are described. Emphasis is placed on...

...of interfacial reactions, physical nature of the resulting membranes and methods used to vary membrane **permeability**. Pesticide **microcapsule** formulations can be used to reduce mammalian toxicity and extend activity, to control evaporation, to...

DESCRIPTORS:
CHEMICALS & BIOCHEMICALS: ...**wall**-forming reactants
MISCELLANEOUS TERMS: membrane **permeability**